

CLAIMS

What is claimed is:

1. A method for providing protection against theft and loss of a portable computer system, the method comprising:

establishing boundary conditions within which the portable computer system is authorized for use;

tracking a position of the portable computer system with a global position system (GPS) unit in the portable computer system;

comparing the position to the boundary conditions to identify whether the portable computer system has violated the boundary conditions; and

performing anti-theft routines when the position has violated the boundary conditions.

2. The method of claim 1 wherein performing anti-theft routines further comprises calling a preset phone number with a cellular calling facility of the portable computer system.

3. The method of claim 1 wherein performing anti-theft routines further comprises prompting a user for a password, wherein when the password matches a master password, operation of the portable computer system continues uninterrupted.

4. The method of claim 3 wherein when the password does not match the master password, operation of the portable computer system is disabled.

1 5. The method of claim 1 wherein tracking further comprises reporting the
2 position of the portable computer system at preset intervals.

Sub 32/ 1 6. A method for providing protection against theft and loss of a portable computer
2 system, the method comprising:

3 utilizing GPS (global position system) functionality within a portable computer
4 system to track a position of the portable computer system;

5 identifying when the position tracked by the GPS functionality violates preset
6 boundary conditions of the portable computer system; and

7 utilizing cellular calling functionality within the portable computer system to report
8 a potential theft of the portable computer system when the preset boundary conditions
9 have been violated.

Sub 32/ 1 7. The method of claim 6 further comprising establishing the preset boundary
2 conditions as a chosen distance from a given location within which use of the portable
3 computer system is allowed.

1 8. The method of claim 6 wherein the step of utilizing cellular calling
2 functionality further comprises calling a preset emergency phone number.

1 9. The method of claim 8 wherein the step of utilizing further comprises sending a
2 location of the portable computer system to the preset emergency phone number.

10. The method of claim 9 wherein sending further comprises sending the location as a data stream using facsimile protocol.

11. The method of claim 6 further comprising utilizing the GPS functionality at regularly scheduled predetermined intervals.

12. The method of claim 6 further comprising utilizing the GPS functionality during booting upon power-up of the portable computer system.

13. A communication control system for providing built-in anti-theft capabilities in a portable computer system, the communication control system comprising:

- a controller;
- a GPS (global position system) unit coupled to the controller for tracking a position of the portable computer system; and
- a storage unit, the storage unit coupled to the controller and storing preset boundary conditions and out-of-boundary actions, wherein the controller compares the position to the boundary conditions and initiates the out-of-boundary actions when the comparison identifies a violation of the boundary conditions.

14. The system of claim 13 further comprising cellular unit for calling a preset phone number as an out-of-boundary action.

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Figure 1 displays 12 histograms showing the distribution of the number of non-zero elements in the vector x for different values of n (10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120). The x-axis is labeled 'x' and ranges from 0 to 120. The y-axis is labeled 'count' and ranges from 0 to 100. The distributions are centered around 60 and become narrower as n increases.

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